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(56) Documents Cited

GB 2156569 A

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(54) Rattle

(57) A rattle comprises a body rotatable about a handle 20,25, the body having a centre of gravity which is offset from its axis of rotation about the handle so that it can be caused to rotate about the handle by appropriate movement of the handle by a user, and means 26,27 to cause sound production when such rotation takes place, wherein the body (10) includes an external portion (12,13,14,15,16) of a material selected to provide a low risk of personal injury if struck thereby, e.g. resiliently deformable, low density material such as foamed polymeric material. The body is preferably made using laminae 12,13,14,15,16 bonded together and the sound producing means comprises a tongue 27 held between the laminae and a toothed or notched element 26 mounted on the spindle of the handle.

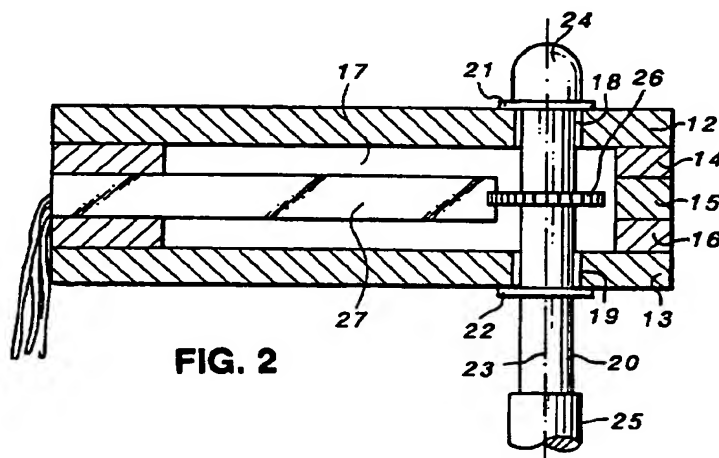


FIG. 2

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995
The print reflects an assignment of the application under the provisions of Section 30 of the Patents Act 1977.
At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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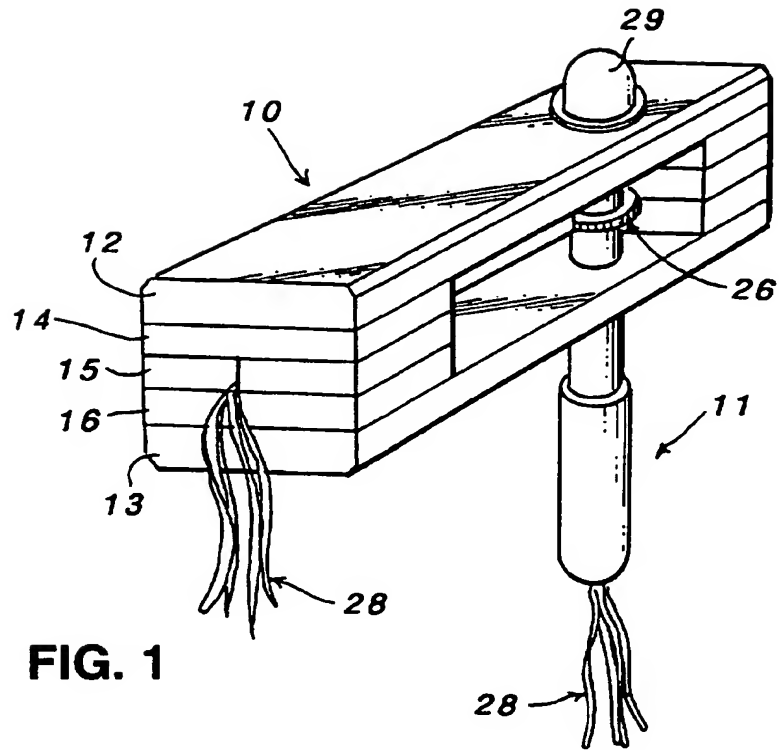


FIG. 1

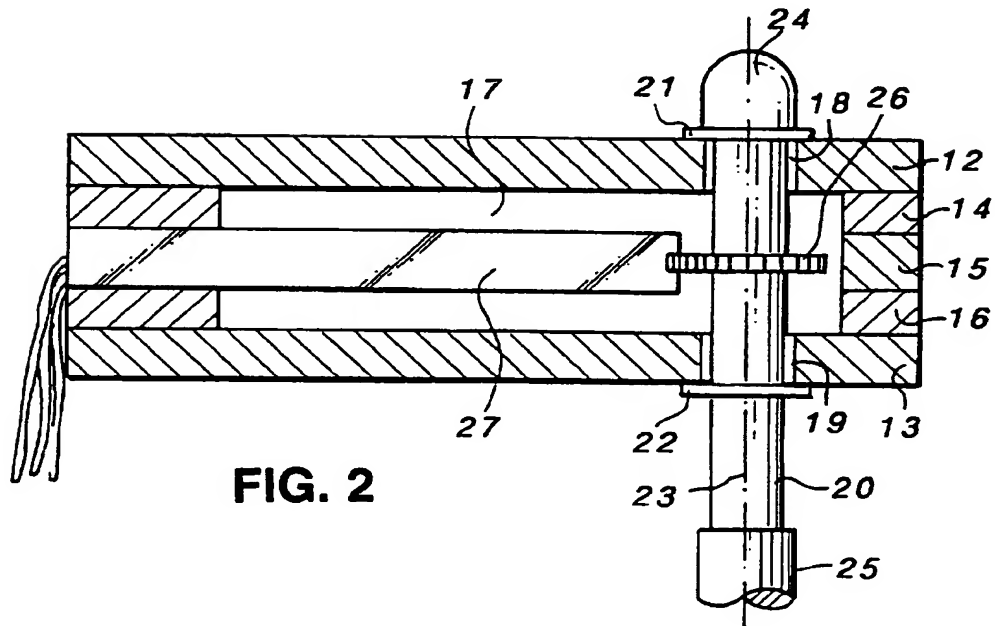


FIG. 2

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PATENTS ACT 1977

GMD/A8650GB/D17

Title: RATTLE

Description of Invention

This invention relates to a rattle, of the kind comprising a body rotatable about a handle, the body having a centre of gravity which is offset from its axis of rotation about the handle so that it can be caused to rotate about the handle by appropriate movement of the handle by a user; there being means for causing sound production when such rotation takes place. Such a rattle will hereafter be referred to as a rattle of the kind specified.

Rattles of the kind specified, which sometimes in Britain are known as football rattles because of their use in former years by supporters of football teams, traditionally have been made predominantly of wood. Even the sound-producing means, which usually have comprised a resilient tongue held by the body and engaging the periphery of a toothed wheel carried by the handle so as to produce a series of clicks when the body rotates about the handle, have been of wood. This has led to the banning of such rattles from being brought into football stadiums by supporters, because of the potential hazards of their use. In a tightly-packed crowd, the rapid rotation of a heavy wooden body about a handle held by a person presents a danger of injury to adjacent persons if hit thereby accidentally or intentionally. The user of such a rattle might even hit and injure himself.

The present invention aims to address this disadvantage.

According to the present invention, I provide a rattle of the kind specified wherein the body includes at least an external portion of a material selected to provide a low risk of personal injury if struck thereby in normal use.

Preferably the material of said body portion is a resiliently deformable material of low density (compared with traditional rattle materials such as wood) and which is shape-retaining to the extent necessary for the rattle to be

constructed as described hereafter, and conveniently these characteristics may be afforded by a foamed polymeric material.

Preferably the foamed material is a closed-cell material, so that water will not be absorbed if the rattle is used in conditions or situations where it might come into contact therewith.

Preferably substantially the entire body of the rattle is made of said material.

It will be appreciated that, when I refer to a material as being unlikely to produce personal injury if struck thereby, I mean that the risk of such injury is reduced as compared with that of being struck by a comparably sized piece of a material such as wood, metal, or rigid plastics having a density comparable with typical densities of natural or processed wooden materials. The risk of injury from impact with an article can never be reduced to zero as even a lightweight and/or extremely soft resilient material can cause injury if it is applied to a part of the body with sufficient force, or if it meets a particular vulnerable part of the body.

Preferably the sound-producing means of a rattle in accordance with the invention comprises a tongue held by the body and resiliently engaging a toothed, notched, or otherwise non-circularly configured peripheral part of an element carried by the handle. Thus a series of clicks is produced when the body rotates relative to the handle and element carried thereby.

Conveniently the body may be constructed of a number of laminae of said material, held together by the use of adhesive or by any other suitable securing method, e.g. fusion. The construction may include spaced laminae each extending substantially the whole length of the body, separated from one another at their end regions by relatively short spacing laminae so as to define a recess or hollow wherein the sound producing means of the rattle is accommodated.

The laminae may be of different coloured material so that the rattle presents the colours of a particular football team, other sporting team, or other cause which the user wishes to support.

A further possibility in accordance with the invention is that the body may incorporate one or more portions of a flexible material constituting an inflatable chamber or chambers.

The tongue of the sound-producing means may be held between said spacing laminae.

The handle, which preferably is a tubular element of plastics material of tubular configuration, may be rotatably supported relative to the body with the intermediary of bushing means held in the body, to provide support therefor by bearings which do not wear rapidly in use.

These and other aspects of the invention will now be described by way of example with reference to the accompanying drawings, of which:-

Figure 1 is a perspective view of a rattle in accordance with the invention;

Figure 2 is a section through the rattle of Figure 1.

Referring to the drawings, a rattle comprises a body 10 and a handle indicated generally at 11. As illustrated, the body is of generally rectangular shape in both elevation and plan views and also in transverse cross-sectional view but with the addition of bevelled corners, although it will be appreciated that the body could alternatively be of some other shape in one or more of such views. For example, it could taper towards one or both of its ends or possibly could be of the overall shape of a rugby football or American football.

The body is made of a relatively lightweight and resiliently deformable material, specifically a foamed plastics or rubber material. There are many such materials which would be suitable to be used in the construction of the body as described hereafter, and selection thereof is a matter of choosing a material of appropriate density and rigidity. Preferably it is a closed-cell material. By way of example, closed-cell expanded polyethylene, LD33 or LD45, may be utilised. The body comprises top and bottom laminae 12, 13 which extend the full length of the body, spaced from one another at the ends of the body by intermediate laminae 14, 15, 16 at each end. Thus an opening or recess 17 is provided in the centre of

the body. The laminae are held together by adhesive or other suitable securing method. Towards one end of the body, bushes 18, 19 are inserted in apertures in the top and bottom laminae 12, 13 respectively, and these afford bearing surfaces in which handle member 20 is rotatably supported. The handle member 20, which preferably is of a relatively rigid plastics material of tubular configuration, carries collars 21, 22 so that although the handle is rotatable relative to the body about axis 23 it is not movable therethrough in the direction of such axis. The free end of the handle member 20 above the laminae 12 carries an end cap 24 with a domed top surface, and beneath the laminae 13 a free end portion of the handle member 20 has a hand grip 25.

Within the hollow or recess 17 of the body 10 of the rattle, the handle member 20 carries an element 26 in the form of a wheel with a toothed or notched periphery. This is engaged by the free end of a resilient tongue 27, e.g. of plastics or wooden material, whose other end is held in a slot in the laminae 15 at the remote end of the body 10. When relative rotation between the body and handle is caused, by appropriate movement of the rattle by a user, the tongue 27 in engagement with the periphery of the wheel 26 produces a succession of rapid clicking sounds.

Preferably the laminae 12 to 16 are of colours chosen to represent a particular football or other team. For example, laminae 12, 13, 15 might be the same colour as one another whilst laminae 14 and 16 are the same as one another but a different colour.

Various other features may be included in the rattle. For example, in Figure 1 there are illustrated streamers 28 connected to the handle and body, which may be strips of coloured material again in "team" colours or possibly merely decorative and/or eye catching, e.g. of a reflective "tinsel" type material.

A further feature which may be provided in the rattle is that the handle could be equipped with a resilient bulb and a reed to act as a horn, operable by squeezing of the bulb by the user. The handle member 20, being of

tubular configuration, is readily usable as the body of such a horn: in this case it would not be closed by the end cap 24.

The body 10 of the rattle may incorporate a whistle, siren, or other sound-producing means operable by air flow when the body is rotated rapidly about the handle. This is preferably provided at the end of the body remote from the handle 10, and may comprise either a suitable sound-producing element or elements held in the laminae 12 to 16 at such region of the body or the laminae themselves may be shaped to operate in this manner.

A further possibility is that the rattle may be provided with means for producing a lighting effect, e.g. by providing a battery accommodated within the handle member 20, commutating means, and lamps or light-emitting-diodes which are thereby caused to flash when the body rotates about the handle.

Two or more tongues engaging non-circular elements carried by the handle member 20 could be provided if required.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Agent's Ref: P01333GB

CLAIMS

1. A rattle comprising a body rotatable about a handle, the body having a centre of gravity which is offset from its axis of rotation about the handle so that it can be caused to rotate about the handle by appropriate movement of the handle by a user, and means to cause sound production when such rotation takes place, wherein the body includes an external portion of a material selected to provide a low risk of personal injury if struck thereby.
2. A rattle according to Claim 1, in which the external body portion is a resiliently deformable material of low density.
3. A rattle according to Claim 2, in which the resiliently-deformable material of low density is a foamed polymeric material.
4. A rattle according to Claim 1, 2 or 3, in which the entire body is made of the material selected to provide a low risk of personal injury.
5. A rattle according to any preceding Claim, in which the means to cause sound production is a tongue held by the body and resiliently engaging a toothed or notched peripheral part of an element carried by the handle.
6. A rattle according to any preceding Claim, in which the body is constructed of a number of laminae bonded together.

7. A rattle according to Claim 6, which includes spaced laminae each extending substantially the whole length of the body and separated from one another at their end regions by short spacing laminae so as to define a recess to accommodate the means to cause sound production.
8. A rattle according to Claims 5 and 7, in which the tongue is held between the spacing laminae.
9. A rattle according to any preceding Claim, in which the handle is rotatably supported relative to the body by the intermediary of bushing means held in the body to provide bearings support therefor.
10. A rattle according to any one of Claims 6 to 9, in which the laminae are of differently coloured material.
11. A rattle according to any preceding Claim, in which the means to cause sound production comprises means operable by air flow when the body is rotated about the handle.
12. A rattle according to Claim 1, substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Amendments to the claims have been filed as follows

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CLAIMS

1. A rattle comprising a body (10) rotatable about a handle (11), the body having a centre of gravity which is offset from its axis of rotation (23) about the handle so that it can be caused to rotate about the handle by appropriate movement of the handle by a user, and means (26,27) to cause sound production when such rotation takes place, wherein the body includes an external body portion formed of resiliently deformable material of low density.
2. A rattle according to Claim 1, in which the resiliently-deformable material of low density is a foam polymeric material.
3. A rattle according to Claim 1 or 2, in which the body is constructed of a number of laminae (12,13,14,15,16) bonded together, each formed of the resiliently-deformable material.
4. A rattle according to Claim 3, which includes spaced laminae (12,13) each extending substantially the whole length of the body and separated from one another at their end regions by short spacing laminae (14,15,16) so as to define a recess to accommodate the means (26,27) to cause sound production.
5. A rattle according to Claim 4, in which one end of the tongue (27) forming part of the sound production means is held between spacing laminae (14,15,16).

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6. A rattle according to any one of Claims 3 to 5, in which the laminae (12,13,14,15,16) are of differently coloured material.
7. A rattle according to any preceding Claim, including an auxiliary air flow operated sound production device and/or a lighting effect production device.



The
Patent
Office

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Application No: GB 9516867.0
Claims searched: 1-12

Examiner: David Summerhayes
Date of search: 1 July 1996

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.O): G5J (JCN)
Int Cl (Ed.6): G10K 3/00
Other: Online: WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB2156569A (GOWER)	1-12

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.